

STRATEGIC PLAN SUMMARY

Pacific Science Center is guided by a Strategic Plan that establishes, supports, expands and directs the organization's future program and fiscal goals, and implementation strategies. Flexible enough to respond to changing needs in science education and the community, the Strategic Plan is mission-driven and establishes a clear vision of what PSC is and where it is headed. PSC's Strategic Plan was adopted in June 2000.

The Strategic Plan is based on three key components of the plan:

Our Vision - To bring science and children together

Our Mission - To increase the public's understanding of science, mathematics and technology

Our Core Values - Integrity, excellence, teamwork and innovation

To best serve our audience, Pacific Science Center's Strategic Plan focuses on three areas:

Leadership:

- Deliver real hands-on experiences available nowhere else in Washington state
- Educate while entertaining
- Serve as science presentation innovators
- Increase connections with formal education
- Respond to contemporary issues quickly

Financial Resources

- Invest in auxiliary revenues - retail, food service, exhibit rentals.
- Change operating ratio of earned to contributed revenues
- Build cash reserve
- Create program and facility endowment funds

External Forces

- Establish our brand as science, education and entertainment.
- Increase relevant range outside of Seattle
- Expand age offerings beyond current market segments
- Develop Internet strategy

Pacific Science Center's Strategic Plan was developed by the Associate Executive Director for Finance & Planning in collaboration with the Strategic Plan Committee - consisting of eight board members and PSC staff, and chaired by the Board of Directors president-elect. The following steps were used to develop the plan:

- Serving as Strategic Plan Committee Co-Chairs, the Executive Director and the Associate Executive Director for Finance and Planning met in August 1999 to outline the planning process and form a Strategic Plan Committee.
- The committee met in retreat in September 1999 to review the mission, to examine Pacific Science Center strengths and weaknesses, and to determine critical issues for the future.
- Recognizing the changing demographics and interests of the Puget Sound region, PSC commissioned surveys to gain a comprehensive understanding of the community and its future needs. In February 2000, a market research organization conducted member focus groups and visitor surveys to determine demographic profiles, usage patterns and exhibit interests.
- Guided by the results of the public research, the final plan was developed by PSC staff and the Strategic Plan Committee with input from community and education leaders.
- The Board of Directors adopted the final plan at their meeting in June 2000. The Strategic Plan has been implemented by PSC staff who revise and update the operating plan each year to meet the changing needs of the Science Center's audience.

Pacific Science Center's Success in Meeting Goals Established in the Plan

Successful strategic planning and annual updates have allowed PSC to reach the goals as follows:

Leadership:

- ✓ As a means to educate while entertaining, Pacific Science Center presents a variety of IMAX® films in two on-site theaters.
- ✓ Pacific Science Center has increased its connections with formal education as one of the primary providers of in-service training in science and for K-12 teachers in Washington. The most recent effort is **Washington State LASER (Leadership and Assistance for Science Education Reform)**, a statewide collaborative project led by Pacific Science Center and Battelle, which will assist all of the school districts in Washington state in implementing an inquiry-centered science curriculum.
- ✓ To respond to contemporary issues quickly, PSC has developed new Planetarium Shows such as ***The World According to Hubble and Station Vacation*** (part of the Star Station One program).

Financial Resources

- ✓ To increase auxiliary revenues, PSC has contracted with an outside company to manage its retail store, has improved food and beverage service, and has continue to pursue an exhibit rental plan.
- ✓ Pacific Science Center achieved its goal of changing the ratio of earned to contributed revenues from 10percent to 13 percent by adding a second fund-raising event and by pursuing additional sponsorships.
- ✓ PSC is actively pursuing a two-year, Working Capital Fund. To date, \$500,000 has been raised toward the \$2.5 million goal.

External Forces

- ✓ To establish our brand, PSC implemented a new branding campaign in 2000.
- ✓ Relevant range outside Seattle was increased in the spring of 2002, when PSC traveled the exhibit ***Aliens: Worlds of Possibilities*** to Spokane for a three-month venue.
- ✓ Age offerings were expanded through the addition of new *Camp-In* and *Slough Sleepover* programs for kindergarten through third grade students.
- ✓ New Internet strategies in 2002 included the implementation of an on-line registration system for enrichment programs and on-line capability for contributions in 2002.

In September 2002, Pacific Science Center's Executive Director of 23 years, George Moynihan announced his impending retirement. Our Board of Directors spent the following year searching for a replacement. The Board welcomed Bryce Seidl as Pacific Science Center's new President and CEO in July 2003. With a new leader in place, development of the next Long-Range Plan is now underway. The planning process began in November 2003 and adoption by the Board of Directors is expected in June 2004. The planning process will follow three phases:

- Phase 1: Internal Data Gathering - Board Long-Range Planning Committee, interviews with PSC leadership, and open discussions with staff.
- Phase 2: Outside Data Gathering - Engage the broader community through large and small group sessions, framing discussions about PSC's future contributions to the Pacific Northwest region.
- Phase 3: Action Options - Engage Board Long-Range Planning Committee and staff in developing action options and implications, filtered by mission, time and budget.
- Develop high level implementation and communication plans.
 - Draft final report to meet internal and community needs.
 - Present and discuss final reports at May 2004 Board Meeting.
 - Long-Range Plan adopted, June 2004.

***VOLUNTEER AND STAFF TRAINING:
Improving the Visitor Experience***

**MUSEUMS FOR AMERICA
2004**

1. PROJECT DESIGN

Museums provide truly unique and memorable experiences for visitors of all ages. In particular, science centers, as providers of informal science education, have the capacity to develop a foundation for lifelong learning. For many years, Pacific Science Center (PSC) has been recognized in the community as providing exemplary hands-on exhibits, successful educational programs and innovative outreach programs. But the economic downturn of the past few years caused museum-wide staff reductions, which limited our ability to offer the optimal number of visitor - staff interactions including live science demonstrations and planetarium shows. A recent visitor survey confirms the need for improvement in on-site educational programming, specifically in the area of visitor - staff interactions. Moreover, current research in the museum field suggests that a visitor's level of satisfaction is increased when helpful, well-trained staff are present, and that visitors will spend more time exploring exhibits when live programming is increased.¹ "In many cases, the investment in interpretative staff would appear to have a strongly positive impact on customer satisfaction."²

The proposed project, *Volunteer and Staff Training: Improving the Visitor Experience (VASJ)* is a key component of Pacific Science Center's efforts to improve the quality of and to expand the number of visitor interactions while meeting current fiscal realities. A project team, comprised of representatives from the Education Division and Visitors Services/Public Programs Division, has established goals, and planned activities and outcomes to reach these goals.

VAST will improve Pacific Science Center's on-site education program by providing a new structure for in-depth training for staff and volunteers as well as establishing an intern program for high school and college students which will increase the number of live science shows presented to the public. Coordinated staff and volunteer training will focus on science content, presentation skills and questioning techniques to enhance staff interactions with visitors.

GOALS, OBJECTIVES, ACTIVITIES AND OUTCOMES:

The long-term goals of the proposed project are to improve our visitors' museum experience and to increase their engagement in science. The following actions will be taken to reach these goals: First, a new staff member, Education Training Developer, will be hired to create an in-depth training program for exhibit floor staff and will produce an Education Resource Guide. Second, advanced training options will be offered to volunteers. Third, a Science Education Intern program for high school and college students will be created to provide them with informal science education experiences and to provide PSC with staff for additional live science presentations. Fourth, Pacific Science Center work with an evaluator to create assessment tools to use before, during and after completion of the project.

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| Objective 1: | To improve the effectiveness of program delivery via exhibit floor staff. |
| Activity 1: | Hire an Education Training Developer to establish a new, improved training program |
| Activity 2: | Develop an Education Resource Guide for staff and volunteers. |
| Activity 3: | Implement a training program for managers and supervisors. |
| Outcome: | At the end of the two-year training program, 80 percent of the exhibit floor staff will demonstrate an increase in their science content knowledge and interpretation and presentation skills, as well as report an increased comfort level when working with visitors. |

A new position, Education Training Developer (ETD) will be selected to develop a standardized training program for exhibit floor staff. This new position will work within the Education Division and will report to the Education Enrichment Manager. The ETD will also produce an Educational Resource Guide, which will impart basic science center interpretation skills and will focus on science content relating to our permanent and exhibit areas. The guide will also include ideas for interpretative artifacts/props to encourage visitor interaction on the exhibit floor. During the development phase, the Educational Resource Guide will be reviewed by a committee of Pacific Science Center educators as well as the Education Advisory Committee, which is composed of 16

¹ Marino, Margie and Koke, Judy ASTC Dimensions, Face to Face: Examining Educational Staff's Impact on Visitors, January/February 2003.

² ibid

educators from around the state who review the content, methods and relevance of the institution's educational programs. (Please see the outline for the Educational Resource Guide included in the attachments.)

Exhibit Floor Staff Training - Existing

At present, all PSC employees participate in an orientation within their first two weeks of employment. Subsequently, each employee receives training within his or her own department based on specific needs of the position. Exhibit floor staff work within the Public Programs and Visitor Services Department as Visitor Services Representatives (VSRs). VSRs receive basic, introductory training about specific exhibit positions on the Science Center floor. The Visitor Services Representatives Training Manual provides a general overview of PSC procedures, history, emergency protocols and basic information for floor positions. For example, in the *Puget Sound Salt Water Tide Pool* exhibit, VSRs learn how visitors should handle the sea life, and are provided guides to help identify the creatures.

Exhibit Floor Staff Training - Proposed

In the first year of the VAST project, a full-time Education Training Developer will be hired to work with managers and supervisors from different divisions within PSC to develop more in-depth and consistent training for exhibit floor staff with a focus on interpretation skills and science content information. The ETD will be expected to seek out and review successful training programs at other science centers with comparable number of staff and visitors. The ETD will also develop a structure to pursue input from local university, government and industry experts in a variety of fields to provide additional science, mathematics and technology content. The Education Training Developer will be responsible for developing, piloting and implementing the program. Groups of 15 exhibit floor staff (and volunteers) will participate in two, six-hour training sessions focusing on interpretation and presentation skills. In addition, periodic training sessions will provide in-depth science content information as it relates to our exhibits. In order to develop a superior program, the ETD will spend the first four months learning about Pacific Science Center's on-site education programs as well as learning Planetarium Shows, Demonstrations and Discovery Cart presentations. (Please see attachments for a proposed outline for the staff and volunteer training program).

In year two, the ETD will create an Educational Resource Guide, which will complement the Visitor Services Representatives Training Manual described above, as well as imparting basic interpretation skills and focusing on science content relating to our permanent and traveling exhibit areas. A very successful guide, developed during *Titanic: The Artifact Exhibit*, a traveling exhibit, provided additional information for staff and volunteers and will serve as a model for the Educational Resource Guide. The Guide will be developed, reviewed and continually updated to include information about traveling exhibits. In addition, a "train the trainers" model for managers and supervisors will be developed and implemented by the ETD to sustain the VAST training program after the project is completed.

Objective 2: To expand the capacity and effectiveness of Pacific Science Center's volunteers.

Activity 1: Develop a three-tiered training program.

Outcome 1: At the end of the two-year training program, 75 percent of the volunteers who participate in tier two or three of the training program will demonstrate an increase in their science content knowledge and interpretation and presentation skills, as well as report an increased comfort level with visitors.

Outcome 2: At the end of the two-year training program, volunteers will report a greater satisfaction with their volunteer experience.

To gain a better understanding of our more than 600 volunteers, a survey was conducted to determine satisfaction with the existing training program and interest in advanced training sessions. Based on the results, a three-tiered training program will be developed by the Education Training Developer in collaboration with the Volunteer Program Supervisor. (Results of the volunteer survey and the volunteer job description are included in the attachments.)

Volunteer Training Program - Existing

Volunteers take part in two-hour informational interviews and four-hour training sessions, which are held twice per month throughout the year. In addition, volunteers have a full day to explore the institution's exhibits and programs. Afterwards they are paired up with staff and a veteran volunteer for several days of shadowing.

In 2002-2003, 624 volunteers contributed nearly 32,000 hours of service to PSC. The volunteers' services are recognized through a program of benefits and awards for hours served, including admissions, free parking or bus tickets and an annual recognition evening (please see the budget justification under "services" for a complete explanation of volunteer benefits).

Teens, which comprise 60 percent of the volunteer program, are recruited through mailings, school volunteer fairs and school counselors. Senior citizens - many of whom have backgrounds in science, engineering or teaching- comprise 15 percent of the volunteer corps. Volunteers are recruited through the monthly volunteer newsletter, *Archways*, and on-site. Special exhibit volunteers and corporate volunteers are targeted based on the theme of the exhibit through corporate newsletters. PSC also participates in Seattle Works, a local volunteer network dedicated to developing lifetime commitment to volunteerism among young adults.

Training for volunteers is very similar to the process described above for the Visitor Service Representatives. In fact, staff and volunteers often work side by side on the exhibit floor. Volunteers also assist with membership functions, prepare educational materials, work in the gift shop and cafe, provide clerical support in various departments and carry out special projects such as the office-recycling program. Interns from local universities assist in graphics, human resources, accounting and public relations.

Volunteer Training Program - Proposed

Studies show that volunteers prefer meaningful, challenging and interesting opportunities, have higher expectations and look for professionalism and flexibility.³ An informal survey of PSC volunteers also indicates that advanced training is desirable and welcomed. Accordingly, *VAST* will offer volunteers three training options based on each volunteer's personal aspirations, expectations and time commitment:

1. Existing volunteer training
2. In-depth training with exhibit floor staff (as described in Objective 1)
3. Discovery Cart training (described below)

The Discovery Cart program brings the demonstration experience to visitors on an individual hands-on basis. Pacific Science Center has 12 Discovery Cart topics which have been developed and which are available for presentation. Because Discovery Carts are designed for groups of 10 or fewer individuals, the volunteer will be able to adapt the curriculum to a narrower age and knowledge level. Moreover, Discovery Carts are often requested by visiting school groups for their curriculum content. At this time, the number of Discovery Carts available to visitors is very limited. By training volunteers to present carts, an additional 8,000 visitors will be able to participate in this experience each year. (Please see the attachments for a description of the Discovery Cart program).

Providing additional in-depth training on topics such as presentation skills and science content will enable volunteers to take a more active role with visitors and will also provide them with lifelong learning opportunities for their own personal development.

- Objective 3:** To create an on-going Science Education Intern program for high school and college students which will provide them with lifelong learning experiences as well as increase the number of live presentations at PSC.
- Activity 1:** Recruit 20 interns and provide in-depth training for delivery of live science presentations (planetarium show or Science Demonstration).
- Outcome 1:** Interns will demonstrate an increase in their science content knowledge and presentation skills as well as report an increased comfort level when delivering science presentations.
- Outcome 2:** 20,000 additional visitors will experience a Planetarium show or Science Demonstration

Science Education Interns will be recruited from science departments at three local universities, four local community colleges and five local high schools, principally by relying on personal contacts with the faculty, but also including public notices, flyers, and announcements in school papers. The collaboration between community partners, students, staff, and parents leads to meaningful learning experiences that will empower students to achieve their goals and develop as responsible community members. Their presence will also deepen PSC's relationships with the community and with local educational institutions. High school interns will also be encouraged to use the internship experience for their senior projects, a requirement at many Seattle public high schools and a statewide requirement as of 2008.

A team consisting of the Floor Presentation Supervisor, the Floor Presentations Coordinator and the Education Training Developer will develop the intern training program. The proposed internship will be modeled after Pacific Science Center's *Lake Washington Watershed Internship Project* (please see attachments for description), as well as other intern programs at science centers including the Exploratorium, COSI and New York Hall of Science and the Association of Science-

³ Davidson, Jan ASTC Dimensions, Ready, Set, Go!, Maximizing Success with Museum Volunteers, July/August 2001

Technology Center's Youth Alive program. The pilot phase of the VAST intern program is currently underway with a Seattle high school student who is learning to present planetarium shows. Information gathered from his experience will help to shape the development of the intern training. (Please see attachments for a description of the intern training).

Interns will become a part of the Floor Presentations program at PSC and will be supervised by the Floor Presentations Coordinator under the guidance of the Floor Presentation Supervisor. Pacific Science Center is committed to sustaining the internship project after completion of the grant. (The job description for the Science Education Intern is included in the attachments.)

Science Education Interns will be asked to make an initial commitment of four months, 30 hours/month to the program. Cohort groups of four interns will be recruited for renewable periods of four months. Although the internships will be unpaid, participants will be eligible to receive service learning credits, parking reimbursements, bus tokens and beverage vouchers. In addition, intangible rewards and lifelong learning experiences include on-going training in science education and presentation skills including the practical experience of presenting demonstrations and planetarium shows to the general public.

Pacific Science Center's live presentations are designed to offer interactive, inquiry-based science experiences to visitors. They combine hard science with audience participation and sheer fun for remarkably effective informal science education. The demonstrations are 20 minutes long and are designed for 15 to 150 visitors. Activities address basic science concepts such as combustion, low temperature physics and introductory herpetology (the branch of zoology dedicated to reptiles and amphibians). Planetarium shows are live presentations for groups of up to 40 people. They teach basic sky chart interpretation, introduce astronomical concepts and highlight current events and celestial objects.

Live demonstrations are among Pacific Science Center's most popular offerings. Unfortunately, budget constraints limit the number of live presentations that can be offered to the general public. On weekdays, one public demonstration and one public planetarium show are offered. On weekends, two demonstrations and three planetarium shows are presented daily. Frequently, shows are filled to capacity and visitors are turned away. The Science Education Intern program would allow us to increase proven programs by 52 percent - reaching an additional 20,000 visitors annually, at minimal cost, while also enriching the lives of local students. (Descriptions of our Science Demonstrations and Planetarium Shows can be found in the attachments.)

Objective 4: To continually assess the effectiveness of the improved on-site education program.

Activity 1: Consultant will work with PSC staff to develop evaluation instruments.

Activity 2: Visitors will be surveyed before and after implementation of the program.

Activity 3: Exhibit floor staff, volunteers and interns will be assessed to determine the change in their science content knowledge and presentation skills as well as to determine whether they report an increased comfort level when working with visitors.

Outcome 1: Sixty percent of visitors will report greater satisfaction with the improved and expanded on-site education program.

Outcome 2: See outcomes listed under objectives 1, 2 and 3.

Pacific Science Center will contract with Christine Patmont, a Seattle area evaluation consultant, to develop, implement and prepare the summative evaluation of all activities described in the project including:

- Surveying visitors before and after implementation of the program.
- Assessing training programs for staff, volunteers and interns.
- Assessing Education Resource Guide.

Pacific Science Center has contracted with Ms. Patmont since 1995 to provide the evaluation of our Waste Busters education outreach program for middle and high school students. She is also developing an evaluation plan for our on-site school group visits and *Science on Wheels*, our statewide education outreach program, which reaches 135,000 elementary school students each year across Washington state. (Please see the attachments for Ms. Patmont's letter of support for the project.)

2. GRANT PROGRAM GOALS

This proposal will promote the Museums for America goal of Supporting Lifelong Learning for a variety of groups on different levels. First, and foremost, *VAST* will provide improved and expanded lifelong learning opportunities for current and new visitors.

Visitor studies show that "In Science Centers, perhaps more than any other types of museums, facilitators are trained to guide visitors and to promote constructivist self-directed learning."⁴ Second, in-depth training in science concepts and presentation skills not only provides lifelong learning experiences for staff, but also for volunteers and interns ranging in age from 14 to 80.

3. HOW THE PROJECT FITS INTO STRATEGIC PLAN AND MISSION

Volunteer and Staff Training: Improving the Visitor Experience is a key component of Pacific Science Center's mission to increase the public's understanding and appreciation of science, mathematics and technology. By improving the quality and quantity of interactions with the public, the proposed program emphasizes the role of leadership set forth in the Strategic Plan, which directs Pacific Science Center staff to:

- Deliver real hands-on experiences available nowhere else in Washington state.
- Educate while entertaining.
- Serve as science presentation innovators.

VAST represents a significant investment in PSC's future as we align our current resources to better meet our visitors' needs. Institutional systemic change will occur through the development of a new training structure which will better prepare our exhibit floor staff; expand volunteer opportunities; provide in-depth learning experiences for high school and college students and develop a system to assess visitor satisfaction. Moreover, the training program will become institutionalized through the creation of the Education Resource Guide and through the instruction of managers and supervisors concerning how to continue the training after the grant period ends and the ETD position is eliminated.

4. STRATEGIC PLAN: PROCESS AND FINANCIAL RESOURCES

Pacific Science Center's Strategic Plan was developed in 2000 by the Associate Executive Director for Finance & Planning in collaboration with the Strategic Plan Committee - consisting of eight board members and several PSC staff, and chaired by the Board of Directors president-elect. The following steps were used to develop the plan:

- Serving as Strategic Plan Committee Co-Chairs, the Executive Director and the Associate Executive Director for Finance and Planning met in August 1999 to outline the planning process and form a Strategic Plan Committee.
- The committee met in retreat in September 1999 to review the mission, to examine Pacific Science Center strengths and weaknesses, and to determine critical issues for the future.
- Recognizing the changing demographics and interests of the Puget Sound region, PSC commissioned surveys to gain a comprehensive understanding of the community and its future needs. In February 2000, a market research organization conducted member focus groups and visitor surveys to determine demographic profiles, usage patterns and exhibit interests.
- Guided by the results of the public research, the final plan was developed by PSC staff and the Strategic Plan Committee with input from community and education leaders.
- The Board of Directors adopted the final plan at their meeting in June 2000. The Strategic Plan has been implemented by PSC staff who revise and update the operating plan each year to meet the changing needs of the Science Center's audience.

Long-term Financial Stability

Pacific Science Center has established the following goals and has taken the corresponding steps toward achieving these goals to ensure the long-term financial stability of the organization:

- Invest in auxiliary revenues - retail, food service, exhibit rentals
 - ✓ *To increase auxiliary revenues, PSC has contracted with an outside company to manage its retail store, has improved the food and beverage services, and has pursued an aggressive exhibit rental plan.*
- Change operating ratio of earned to contributed revenues
 - ✓ *Pacific Science Center is currently working toward changing the ratio of earned to contributed revenues. The goal is to increase contributed revenues from 10 to 15 percent by adding a second fund-raising event and pursuing additional sponsorships.*
- Build cash reserve
 - ✓ *PSC is actively pursuing a two-year, \$2.5 million campaign for a Working Capital Fund.*
- Create program and facility endowment funds

⁴ Marino, Margie and Koke, Judy ASTC Dimensions, Face to Face: Examining Educational Staff's Impact on Visitor's, January/February 2003.

- ✓ *Building the endowment campaign is currently underway in the "quiet phase" and is expected to go public in late 2004.*

Pacific Science Center is currently developing on a new long-range plan that will be completed in June 2004. Please see the Strategic Plan Summary for a full description of the process.

5. APPROPRIATENESS OF PROJECT FOR INSTITUTION, AUDIENCE

The audience for the proposed project is composed of current and future visitors to Pacific Science Center, which offers a vast array of science, mathematics and technology education programs. Reaching all of Washington's 39 counties, as well as areas of Idaho and Montana, the Pacific Science Center's education programs served 305,000 students, teachers and adults last year. On-Site Instructional Programs for school group visitors, which include exhibits, demonstrations, planetarium shows and IMAX® films, served 93,176 school children, teachers and adults in 2002-2003.

Located in Seattle, King County, PSC's immediate community is the largest metropolitan area in the Pacific Northwest (3.28 million, 2000 census). An August 2003 PSC visitor survey (180 respondents) conducted by Morey and Associates indicated that 65 percent of our visitors came from the Seattle metropolitan area, 10 percent from the rest of Washington state, 21 percent from other states in the U.S. and four percent from international locations. With more than 29,000 member households, Pacific Science Center has one of the largest membership bases of any science center in the country.

Assessment of Visitor Needs

Studies of museum experiences across the country have found that visitor satisfaction is increased when helpful, welltrained staff are present.⁵ Assessments of Pacific Science Center's visitors also confirm this. In-person bi-yearly visitor surveys, conducted by Morey and Associates, a market research and consulting firm, provide valuable information about PSC's visitors and their attitudes concerning the quality of their experiences.

Data collected through these visitor surveys and evaluations indicate that Pacific Science Center is rated highly overall and considered an excellent educational experience. But the data also indicate that there is a need for improvement in the area of visitor - staff interactions. Specifically, visitors have commented on the limited number of live presentations and lower number of staff in the exhibit areas. The number of public Science Demonstrations, Planetarium Shows and Discovery Carts has indeed been significantly reduced from an average of three or four per weekday down to one per weekday due to the fiscal constraints mentioned earlier.

PSC visitor feedback is echoed in Lynn Dierking and John Falk's book, *Learning From Museums*, which cited several studies indicating that "Museum staff - volunteers, guides, explainers, demonstrators and performers - positively influence the experience, particularly when staff are skilled interpreters, helping to facilitate and make the experience meaningful for visitors."⁶ "Specific findings indicate that participants' general perception is that these experiences are informative, educational, and valuable."⁷

Offering various modes of staff and volunteer interaction with visitors also helps to address different learning styles. George Hein, in his book *Learning in Museums*, found the need for museums to help the visitor connect with what is familiar, and to offer a wide range of experiences to meet the needs of individual visitors.⁸ Live science presentations can assist visitors whose learning styles are not addressed by exhibits. Furthermore, these offerings can guide visitors through more complex processes such as a chemical reaction, and can provide an up-close encounter with a live animal or present experiments with liquid nitrogen.

Improving and expanding visitor interactions with staff and volunteers will have a significant impact on a visitor's experience and overall satisfaction.

6. PROJECT RESOURCES: TIME AND BUDGET

The first step to achieving the goal of the project is to hire a full-time Education Training Developer (a two-year position). After

⁵ Marino, Margie and Koke, Judy ASTC Dimensions, Face to Face: Examining Educational Staff's Impact on Visitors, January/February 2003

⁶ Falk, J.H. and Dierking L.D. 2000, *The Museum Experience*, Washington D.C.: Whalesback Books

⁷ ibid

⁸ Hein, G.E. 1998, *Learning From Museums*, London: Routledge

spending the first four months learning about Pacific Science Center's on-site education programs and learning Planetarium Shows, Science Demonstrations and Discovery Cart presentations, the ETD will spend the next three and half months developing a training plan for staff and volunteers. The ETD will work with the project team, composed of representatives from the Education Division and Visitors Services/Public Programs Division, to build upon Pacific Science Center's extensive enrichment and outreach programs already in place. At the same time, the Floor Presentations Coordinator will begin the process of recruiting high school and college students for the Science Education Intern program. She will also work with the ETD to develop the training plan for the interns. Initial development for all training will be completed within the first nine months of year one, and a pilot phase has been built into the schedule to ensure the training meets the needs for which it has been created.

The Education Training Developer will begin development of the Educational Resource Guide in the last few months of year one. The Guide will be developed, reviewed and continually updated to include information about traveling exhibits. Training for managers and supervisors will take place in the last six months of the project to insure the sustainability after grant funding ends. (Please see organizational chart in the attachments to understand how this project fits within the overall activities of the museum.)

During the past 41 years, Pacific Science Center has implemented many federally and privately funded grant programs requiring the same administrative, accounting and support services necessary to carry out this project. The project budget is cost effective because we will be increasing and improving upon programs that are already in place such as demonstrations, shows, carts and a pre-existing, successful volunteer program. A significant percentage of the IMLS requested funds have been allocated to the evaluation component. We anticipate the assessment process will not only document the successes and challenges of this project, but will also teach our staff methods to continually evaluate our programs. Donated staff and volunteer time also add to the cost efficiency of the project. The Project Director will provide the overall direction for the project and has many years of experience overseeing federal grants.

7. PROJECT RESOURCES: PERSONNEL AND TECHNOLOGY

Pacific Science Center considers its staff to be one of its most critical resources. The key members of the project team listed below have collaborated to create the VAST project plan. In most cases, the permanent staff will be donating their time to the project.

Dennis Schatz, Vice President, Education and Exhibits, has been on the PSC staff for the past 25 years and will serve as the Project Director. Mr. Schatz will be responsible for administering the grant and overseeing the project budget. He is currently serving as Project Investigator/Director for three federally funded projects which will be completed before the proposed project begins. Mr. Schatz will donate 3 percent of his time to this project. **Heather Gibbons**, Education Enrichment Manager, will donate 15 percent of her time to this project. Ms. Gibbons will be responsible for hiring and supervising the full-time Education Training Developer as well as overseeing the evaluation process. Ms. Gibbons currently oversees a variety of enrichment programs, including two grant-funded projects, which will be completed before the proposed project begins. The full-time **Education Training Developer** will work with staff and volunteers to improve the overall quality of the visitor experience. See attached job description for further details.

Beth Amsbary, Floor Presentation Supervisor, has 17 years of experience in interactive education. Ms. Amsbary has worked at Pacific Science Center since April 2003 and will be responsible for selecting, training, and supervising the interns and will donate 15 percent of her time to this project. **Holly Csigá**, Floor Presentations Coordinator will be responsible for recruiting, training, scheduling, and supervising the interns. In 2003, she earned the "Outstanding Teamwork by An Individual" award for her unique skills in bringing various departments together to work successfully. Ms. Csigá will devote 38 percent of her time to this project.

Kurt Koller, Visitor Services Manager, has been with Pacific Science Center since September 1994. He is responsible for overseeing the Visitor Services Representatives and volunteer program. He holds a B.A. from the University of Michigan. Mr. Koller will donate 15 percent of his time on this project. **Virginia Vacchiery**, Volunteer Program Supervisor at Pacific Science Center, will help recruit volunteers to learn and implement the Discovery Cart program. She will support the Education Training Developer to ensure that volunteer and staff training is successful. Ms. Vacchiery started at the Pacific Science Center in 1989 as a teen volunteer and has been a staff member for 11 years. She will donate 30 percent of her time to this project.

BUDGET JUSTIFICATION

SALARIES AND WAGES (PERMANENT STAFF)

Pacific Science Center will support the project with six permanent staff. **Dennis Schatz**, Vice President, Education and Exhibits, will donate 3 percent of his time to the project. He will be responsible for administering the grant as the Project Director, including overseeing the project budget. **Heather Gibbons**, Education Enrichment Manager, will be responsible for hiring and overseeing the Education Training Developer as well as working with the evaluation consultant to develop and implement project evaluation. She will donate 15 percent of her time to the project. **Beth Amsbary**, Floor Presentation Supervisor, will collaborate with the Education Training Developer and Floor Demonstrations Coordinator to develop the training for the interns. Ms. Amsbary will donate 15 percent of her time to this project.

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Holly Csiga, Floor Presentation Coordinator, will be responsible for recruiting, training, scheduling, and supervising the interns. She will work closely with the Education Training Developer to train interns to deliver Science Demonstrations and Planetarium Shows as well as oversee the additional shows, maintain supplies and records, and ensure the overall quality of the program. Due to the extent of added responsibility, 38 percent of Ms. Csiga's salary will be requested from IMLS. After the grant period ends, Pacific Science Center's operating budget will absorb this additional cost.

Kurt Koller, Visitor Services Manager, will donate 15 percent of his time to this project. He will oversee the development of the volunteer training. **Virginia Vacchiery**, Volunteer Program Supervisor, will be responsible for recruiting volunteers to learn and implement the Discovery Cart program. She will donate 30 percent of her time to this project.

SALARIES AND WAGES (TEMPORARY STAFF)

The full-time **Education Training Developer** will work with staff and volunteers to improve the overall quality of the visitor experience. This new position will work in the Education division and will report to the Education Enrichment Manager. See attached job description for further details.

All salaries have been increased in year two by three percent to adjust for cost of living increases.

FRINGE BENEFITS

Benefits for all staff have been calculated at 20 percent.

CONSULTANT FEES

Pacific Science Center will contract with Chris Patmont to evaluate this project as defined by the Institute of Museum and Library Services. The cost of the evaluation is based on Ms. Patmont's bid.

TRAVEL

Bus tokens will be provided to interns based on the following equation:

20 interns, eight days per month (16 round trips), for four months each.

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MATERIALS. SUPPLIES AND EQUIPMENT

Pacific Science Center will provide a computer and monitor for the Education Training Developer for use during the two-year grant period. Materials and supplies required to complete the project include demonstration supplies such as planetarium projector bulbs, liquid nitrogen, safety goggles, gloves, balloons, slides and other props for additional Science Demonstrations and Planetarium Shows. The cost estimate is based on current yearly expenses of these materials and supplies. Printing costs include copies of the Education Resource Guide, which is calculated based on the printing of 600 Guides at \$2.00, and evaluation materials. We are requesting IMLS funds to pay for materials, supplies and printing costs which are needed to complete the grant activities.

SERVICES

Volunteers at Pacific Science Center are thanked for their service in a variety of ways. AFM Hospitality is a very generous donor which provides hotel rooms and dinner coupons for volunteer service based on the number of volunteer hours that individuals contribute. These benefits range from a breakfast or lunch for two for 150-249 hours of service, a three-night stay for two at a selected hotel for 2000-2999 hours of service, to the grand prize coupons for 52 dinners for 6000 contributed hours of service. Hours of service are based over time, not one year of service. In 2002-2003, 78 volunteers received these benefits.

Volunteers are eligible to receive free parking or bus passes as well as a free beverage coupon for each day of service. Pacific Science Center will donate the cost of these benefits.

OTHER

A total of 20 unpaid intern positions (positions will be renewable, so the total number of different interns will range from 4-20) will be available for the project, four interns per four-month session. Interns will be trained to deliver two different Science Demonstrations as well as two Planetarium Shows. In year one (March 2005 through September 2005), eight interns will spend 960 hours in training and delivering presentations. In year two, 12 interns will be recruited to participate in 1440 hours of training and delivering presentations. As stated in the proposal narrative, each intern will be asked to commit four months to the project. The value of the interns' contribution is based on the Association for Volunteer Administration (AVA) which calculates the 2002 U.S. Average Hourly Value of Volunteer Time at \$16.54 per hour. (AVA web site, <http://www.avaintl.org/resources/dollar.html>.)

Volunteers will be trained to present two different Discovery Carts. Hours are based on the AVA rate described above and the following calculations:

Year One

Discovery Cart training:

25 volunteers, 8 hours each = 200 hrs. x \$16.54 per hour = \$3,308

Discovery Cart delivery:

Three Discovery Carts per day (1 hr. ea.) x 80 days = 240 hours x \$16.54 per hour = \$3,970

Year Two

Discovery Cart training:

75 volunteers, 8 hours each = 600 hrs. x \$16.54 per hour = \$9,924

Discovery Cart delivery:

Three Discovery Carts per day (1 hr. ea.) x 240 days = 720 hours x \$16.54 per hour = \$11,909